
	<b>Test Report</b>		Date	14/07/2016
			TR	05669
			Powersafe Phase Convertors	
Operator: D.Maclachlan		This report is the property of Phase 3 Connectors Ltd and must not, without their written consent be passed on, copied or used for any other purpose		

**Type and description of test**  
**Powersafe Phase Convertor. Direct Resistance With 800A Current.**

**Object:**

The object of this test is to assess the current carrying capacity of the Powersafe 800A Phase Convertor.

**Test method:**

A specified test current shall be applied to the contacts of the specimen for a minimum period of 3 hours or until equilibrium is reached. (Less than 1 degree per hour).  
The Powersafe Phase Convertors will be fed with between 800A and 815A from the 3000A load unit via 2 x 1m lengths of HO7RN-F single core 300mm<sup>2</sup> cables attached to Powersafe 800A Line Connectors.

**Requirements:**

The Phase Convertor must be capable of carrying the specified test current for a minimum period of 3 hours without exceeding the specified temperature rise.

**Test Items**

- 1 x Powersafe Phase Convertor
- 1 x Powersafe Line Source C300 800A Connector terminated with 300mm<sup>2</sup> cable.
- 1 x Powersafe Line Drain C300 800A Connector terminated with 300mm<sup>2</sup> cable.

Instrument	Description s/n	Expiry calibration
Current generation	T & R PCU1 Mk3 P.C.I.T.S. (21TE0216)	20/01/2017
External Load Unit	3000A Loading Unit	20/01/2017
YF-160A Thermocoupler +6 probes	060300489	04/02/2017

**Recorded Results at the end of testing – (detailed hourly results and graph on pg4)**

Probe position	Temperature ° C	T (measured – ambient)	Amps
Ambient	22.4		803
Probe 1 = Convertor Centre Joint	102.2	79.8	803
Probe 2 = Drain Contact	105.2	82.8	803
Probe 3 = Source Contact	105.3	82.9	803
Probe 4 = Convertor Body	52.3	29.9	803
Probe 5 = Cable Core	91.7	69.3	803
Probe 6 = Cable Jacket	71.6	49.2	803



Maximum Allowable Temperature 125°C

Maximum Recorded Temperature Rise @ Insulator Body was 29.9 °C above ambient.

Maximum Allowable Temperature of Contacts 125°C

Maximum Recorded Temperature Rise was 82.9°C above ambient.

Conclusion: Temperature Rise within BS EN 61984 -2009 and VDE allowable limits. PASS

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## T&R PCU1 Mk 3 P.C.I.T.S 3000A





# Test Report




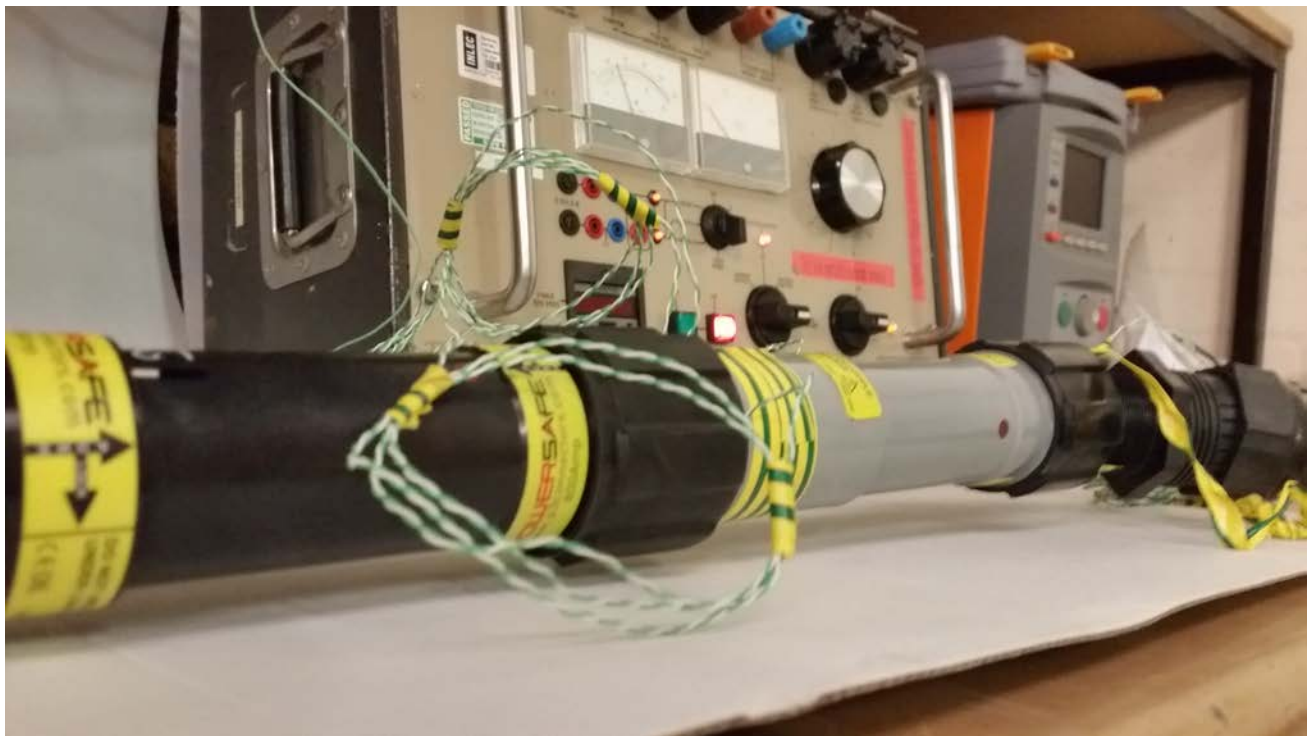
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Time	Drain Contact	Convertor Joint	Ambient	Source Contact	Cable Core	Cable Jacket	Connector Body	Amps
0.5	74.8	75.0	19.0	73.1	62.6	50.7	32.7	809.0
1	92.4	89.9	19.7	91.1	74.6	61.3	42.4	804.0
1.5	99.3	94.8	20.4	97.8	81.4	65.7	46.8	805.0
2	101.4	96.1	20.9	101.2	85.2	68.1	49.5	803.0
2.5	103.0	97.8	21.3	102.7	88.1	69.6	51.2	804.0
3	104.1	99.1	21.5	103.8	91.5	71.4	52.1	803.0
3.5	105.0	101.9	21.4	105.3	91.8	71.6	52.4	802.0
4	104.9	102.1	22.1	105.4	91.6	71.6	52.3	802.0
4.5	105.1	102.2	22.1	105.3	91.6	71.5	52.2	803.0
5	105.2	102.2	22.4	105.3	91.7	71.6	52.3	803.0

